



J. SAM STERNBERG, III, P.E., D.GE
Senior Engineer



Professional Experience

Joined DBA 2018

Total years of experience: 18

Geotechnical Consultant, Thompson Engineering, Mobile, Alabama (2008-2018)

Geotechnical Consultant, QORE Property Sciences., Birmingham, Alabama (2001-2007)

Education

M.S., Civil Engineering, University of South Alabama, 2012

M.Div., New Orleans Baptist Theological Seminary, 2006

B.S., Civil Engineering, University of Kentucky, 2000

Professional Licensure and Certifications

Licensed Professional Engineer in 8 states (AL, GA, TN, SC, TX, MS, LA, VA)

Diplomate, Geotechnical Engineering – The Academy of Geo-Professionals

Fields of Expertise

Management of complex geotechnical projects; Pursuit, management, and execution of geotechnical designs for Design-Build project delivery

Design, construction, and load testing of deep foundations (including driven piles, auger cast piles, drilled shafts, and micropiles); Analysis of pile group behavior

Site investigation and in-situ testing; Laboratory testing and analysis of soil and rock

Shallow foundation, soft soil remediation, retaining walls (including cantilever and mechanically stabilized earth walls), bulkhead and relieving platforms.

Slope stability and excavation stability analyses

Installing and operating geotechnical instrumentation including vibrating wire piezometers, inclinometers, load cells, multiplexers, multiloggers, single channel data loggers, magnetic extensometers and settlement plates.

Major Projects

US 231 Emergency Slide Repair – Morgan County, AL (2020) – Senior Engineer assisting in the design for emergency landslide repair on major US route south of Huntsville, Alabama. Designed rock-socketed drilled shaft foundations for a bridge to replace almost 1000 feet of roadway that was lost. Evaluated the cause of the slide and several alternate repair solutions that included considerations of cost, complexity, and schedule impacts in order to determine the preferred solution to re-open the major route quickly while providing a permanent solution that would remain in service after future slope movements. A robust instrumentation system was designed and installed to monitor the drilled shafts and the slope to provide data for evaluating structure safety for future slides.

SR 53 Bridge Replacement – Hall County, GA (2019-2020) – Replacement of the existing westbound bridge built in 1955 over the Chattahoochee River/Lake Lanier. The eastbound bridge was replaced in the early 1990's, and the new westbound will be located inside the two existing bridges. Performed an independent review of the drilled shaft bent and driven pile abutment designs and constructability.

I-10 Mobile River Bridge – Mobile and Baldwin Counties, AL (2015-Present) – Lead Geotechnical Engineer/Project Manager for Owner's Representative. Project includes new high elevation cable-stayed structure, seven (7) miles of new Bay Way bridges and associated interchanges along the project corridor. Assisted in preliminary conceptual work for retaining wall locations, settlement mitigation and foundation alternatives. Assisted in the preliminary axial/lateral capacity review for driven pile foundations. Large scale load test program involving static, dynamic, statnamic and load cell testing of concrete piles, drilled shafts and steel pipe/h-piles. Field exploration involved over 24,000 feet of soil drilling over land and water.

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I-24 Interchange at SR-2 (Broad St.) and SR-58 (Market St.) – Chattanooga, Hamilton County, TN (2016-2020) – Project Manager/Lead Design Engineer - the project involves approximately 1.1 miles of new roadway and alignment, altering the interchanges. Design included four (4) retaining walls (Mechanically Stabilized Earth Walls and Cast-in-Place) and two new bridges along the alignment. Embankments and cuts on the project up to approximately 40 feet which included large settlement estimates and slope stability review and recommendations.

Birmingham Central Business District I-59/I-20 Interchange (Bridges #14, 15, #24, #25, #32 and Retaining Wall #16) – Jefferson County, AL (2015-2017) – Lead Geotechnical Engineer / Project Manager - This project consists of a rearrangement of the entire downtown interchange system of I-65, I-59/20. Supervised the drilling/field activities, developed the laboratory testing program which culminated in multiple foundation reports. Axial capacity analyses for multiple deep foundation types including 10 ft diameter shafts, micropiles, H-piles as well as the foundation and design for the retaining wall (MSE and CIP). Foundations presented unique challenges in the high karst geology.

Schillinger Road Expansion and Realignment (included Bridge Foundation and Retaining Walls) – Mobile County, AL (2010-2012) – Lead Geotechnical Engineer/Project Manager. Design for foundations for a new bridge over a railroad which also required design of a retaining wall for the abutments. The retaining walls (MSE) were designed for staged construction. The bridge foundations required consideration in the design for negative skin friction due to anticipated settlements and required mitigation. Slope stability and pavement design were also performed throughout the alignment as needed.

Maryland Purple Line (Retaining Walls) – Montgomery and Prince Georges Counties, MD – Assisted in geotechnical design for retaining walls on portions of the 16-mile design-build light rail transit project. Wall types included Mechanically Stabilized Earth and Soldier Pile (both cantilever and anchored) with drilled foundations.

I-85/I-385 Interchange Modifications – Greenville, SC (2014-2015) – Project Manager for the Design Build US I-85/385 interchange modifications field exploration and laboratory testing services for the Geotechnical work. This project involved numerous bridges, retaining walls and roadway modifications/additions. Coordinated with up to four (4) drilling crews, subcontractors, SCDOT, with drilling footage over 13,000 feet. In addition, extensive laboratory testing was performed culminating in multiple Geotechnical Data Subsurface Reports

SR-67 Bridge Replacement – Madison County, AL (2011) – Lead Design Engineer/Project Manager. Analysis included alternate deep foundation design including drilled shafts and steel H-Piles as well as slope stability for the approaches. The bridge spanned and required coordination with the railroad.

Professional Memberships

- American Society of Civil Engineers (ASCE) and Geo-Institute (GI) of the ASCE
 - Deep Foundations Technical Committee Member
 - IFCEE 2018 Session Chair
 - GeoCongress 2019 Session Chair
- Deep Foundations Institute (DFI)
 - Driven Pile Technical Committee Member
 - Testing and Evaluation Technical Committee Member

Selected Publications and Presentations

- Sternberg III, S, and Thompson, WR (2019). "Reducing Risk Through Prebid Load Testing – Case Study of the Mobile River Bridge and Bayway Project," *DFI Deep Foundations Magazine*, July/Aug. 2019, pp. 14-18.
- Sternberg III, S and Bennett, G (2019). "Challenge Accepted: A Project Review of TDOT's S I-24 Interchange at Broad and Market Street," Presented at 50th Annual STGEC Conference, 4-7 November. 2019, Chattanooga, TN.
- Sternberg III, S (2018). "Reducing Risk through Pre-bid Load Testing for the Mobile River Bridge and Bayway Public Private Partnership (P3) Project," Presented at DFI Superpile Conference, 1-3 May. 2019, Seattle, WA.
- Sternberg III, S (2018). "Reducing Risk through Pre-bid Load Testing: A Case Study of the I-10 Mobile River Bridge and Bayway Project," Presented at 19th Annual PDCA DICEP Conference, 19-20 Sept. 2018, Baltimore, MD.